FIG. 1

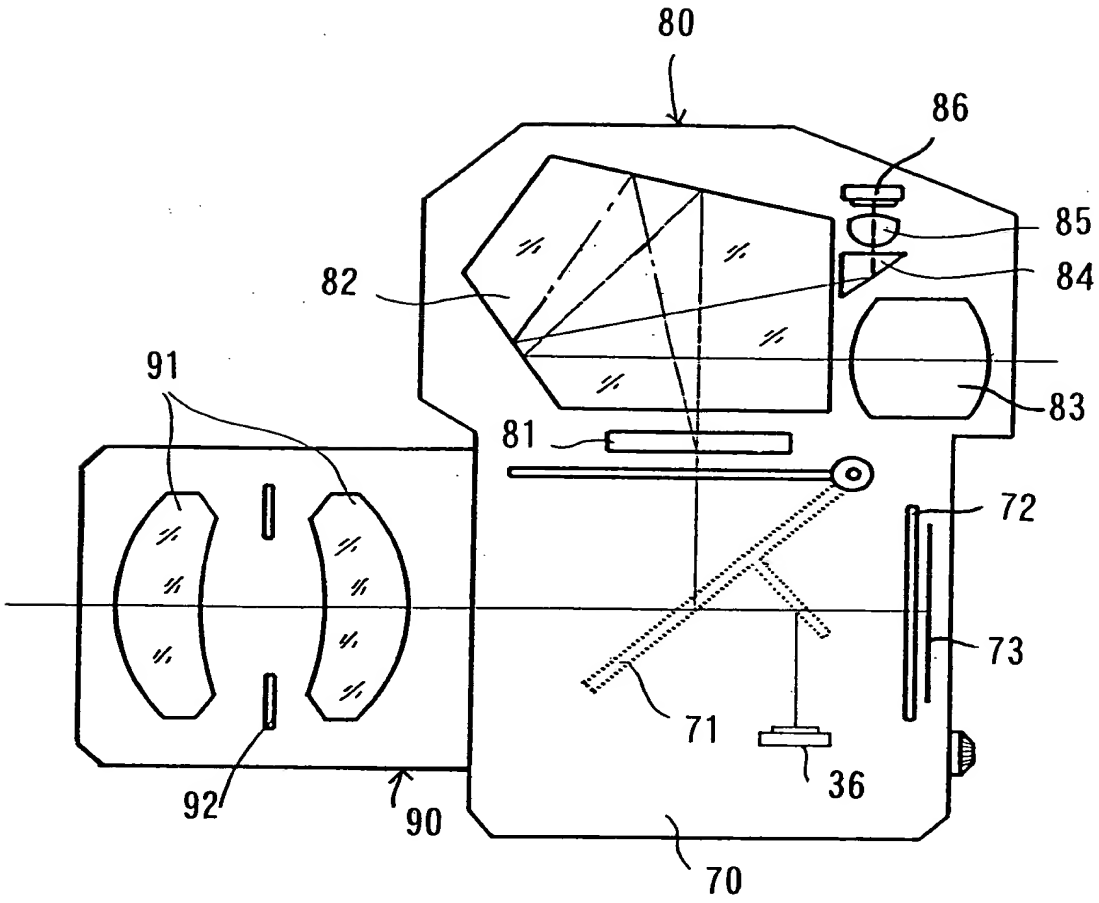


FIG. 2

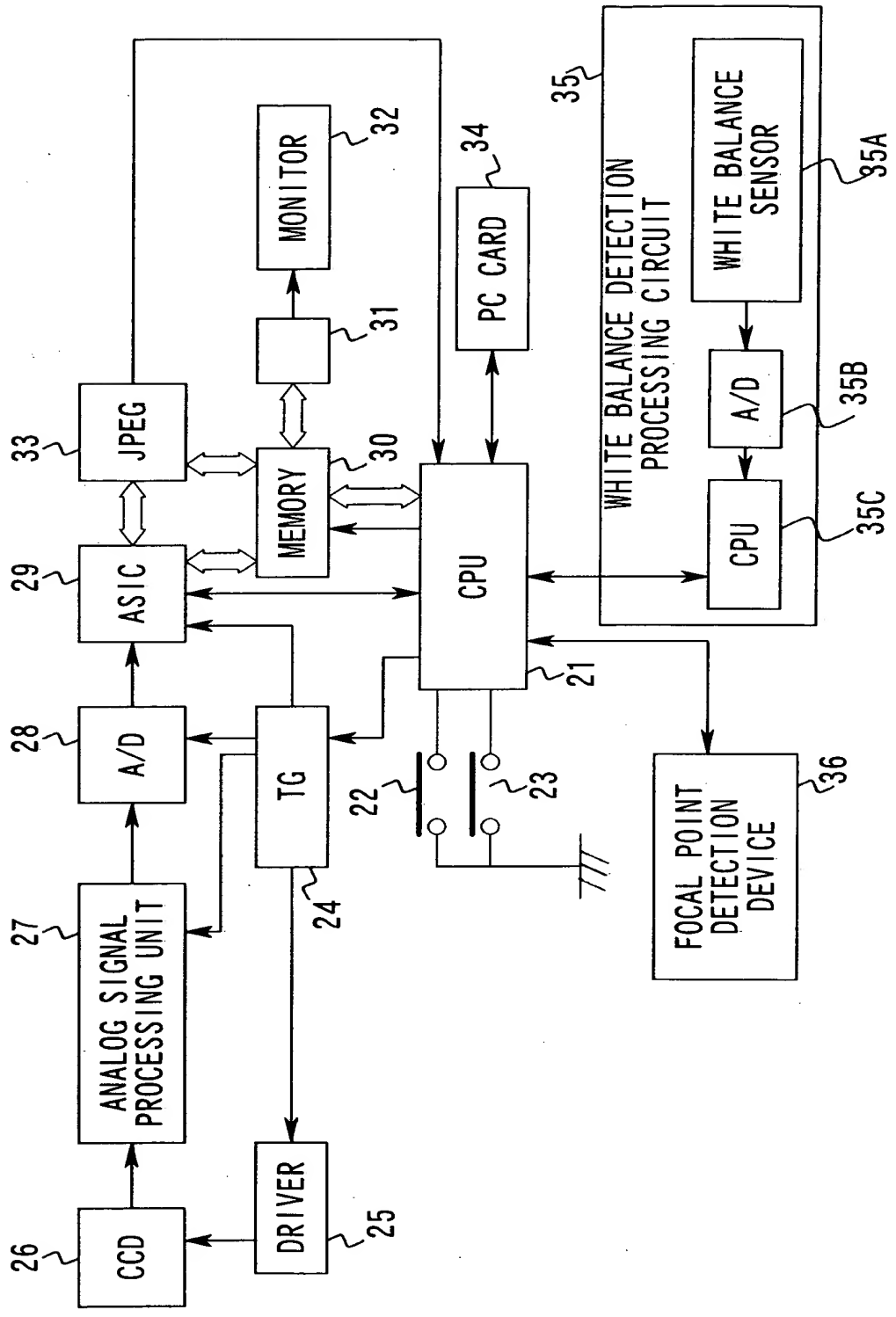

26
CCD
27
ANALOG SIGNAL PROCESSING UNIT
28
A/D
29
ASIC
33
JPEG
30
MEMORY
31
32
MONITOR
25
DRIVER
24
TG
22
23
21
CPU
34
PC CARD
35
WHITE BALANCE DETECTION PROCESSING CIRCUIT
35A
WHITE BALANCE SENSOR
35B
A/D
35C
CPU
36
FOCAL POINT DETECTION DEVICE

FIG. 3

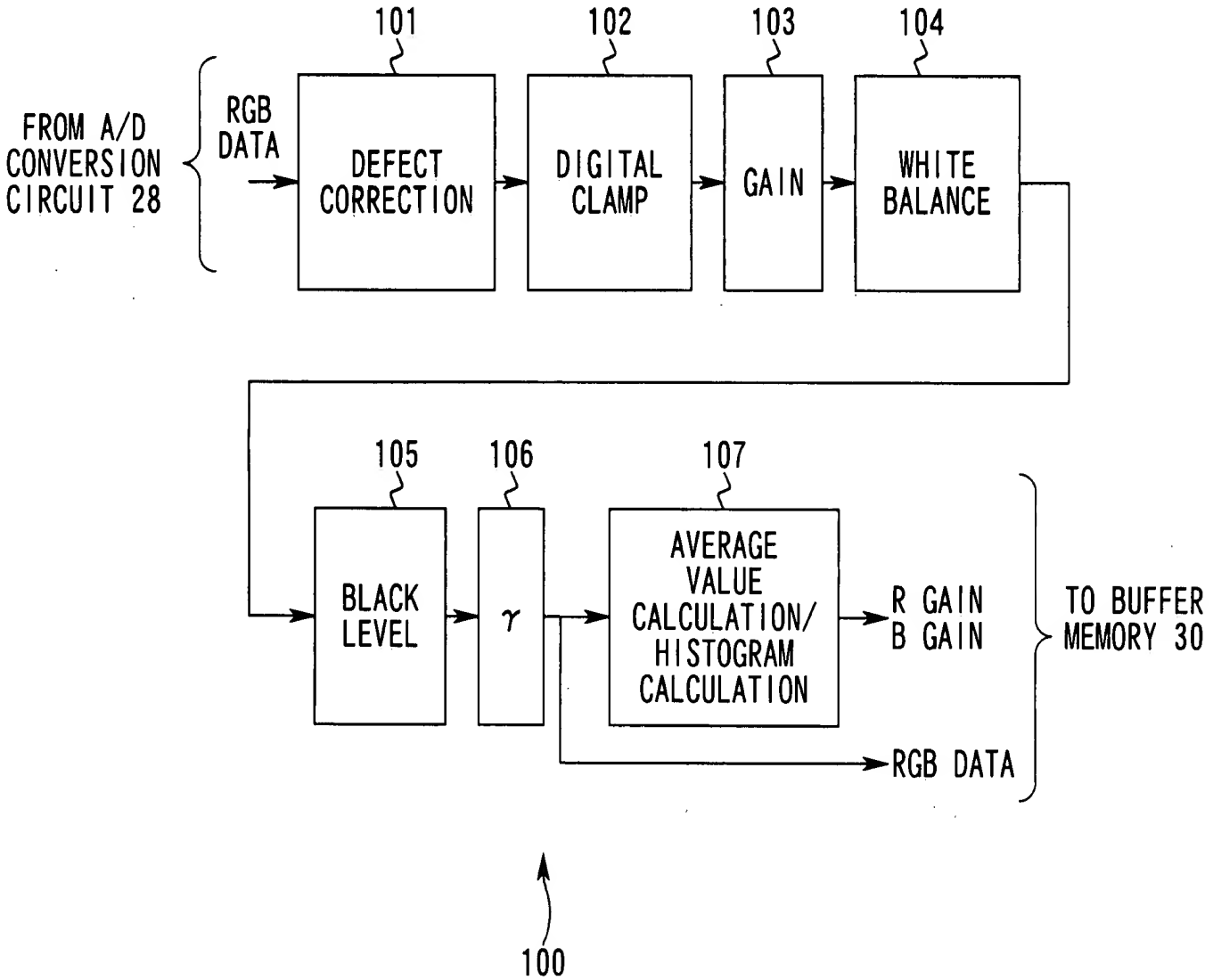

101
102
103
104
FROM A/D CONVERSION CIRCUIT 28
RGB DATA
DEFECT CORRECTION
DIGITAL CLAMP
GAIN
WHITE BALANCE
105
106
107
BLACK LEVEL
γ
AVERAGE VALUE CALCULATION/ HISTOGRAM CALCULATION
R GAIN
B GAIN
RGB DATA
TO BUFFER MEMORY 30
100

FIG. 4

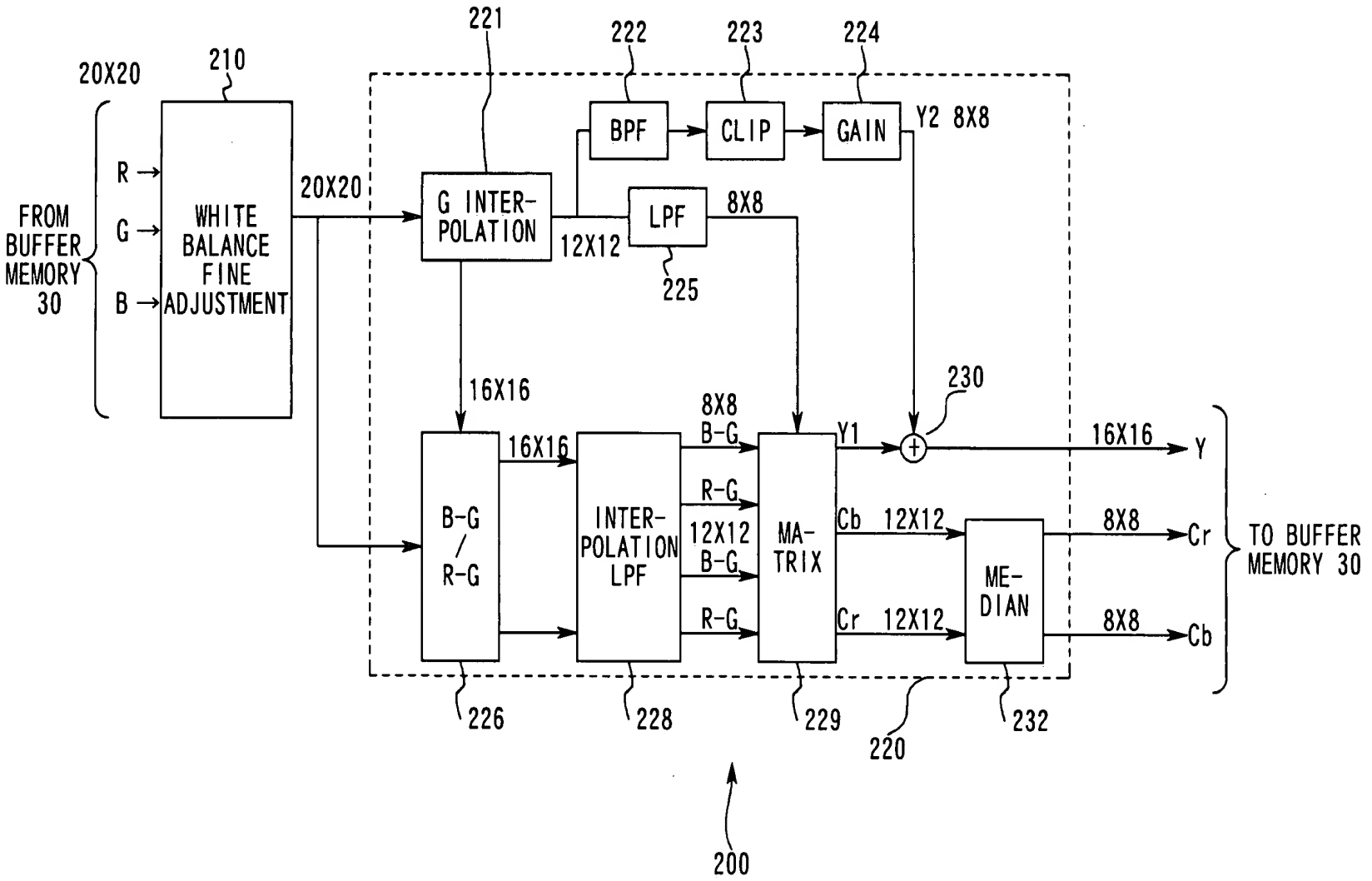
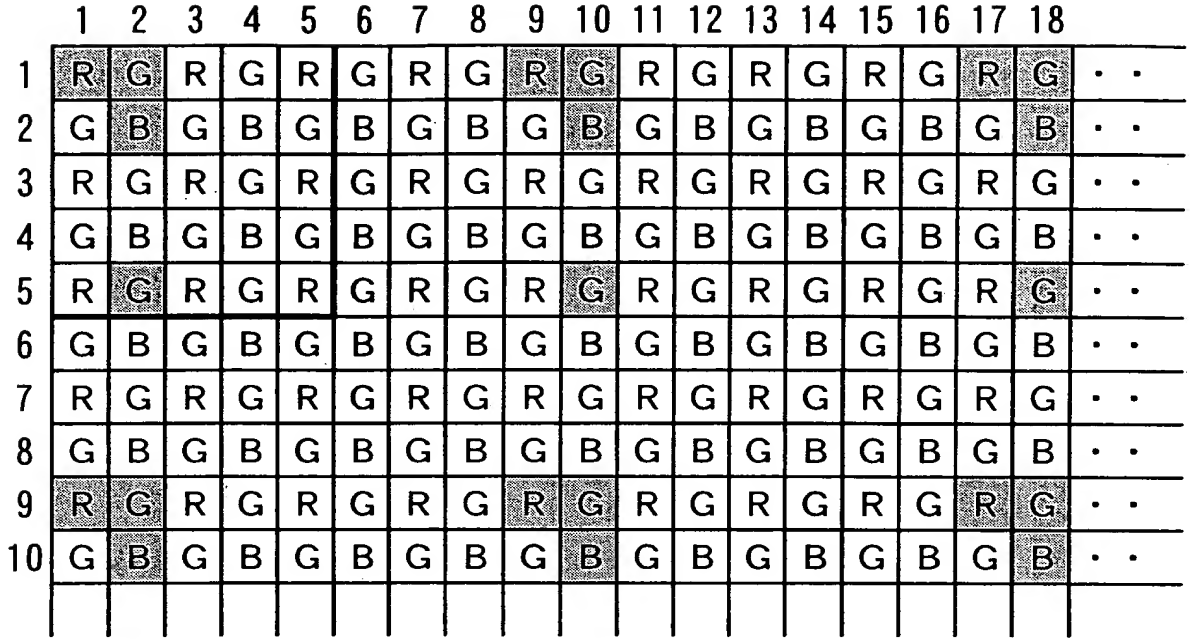


FIG. 5



ADD PIXEL DATA IN SHADED AREAS

FIG. 6

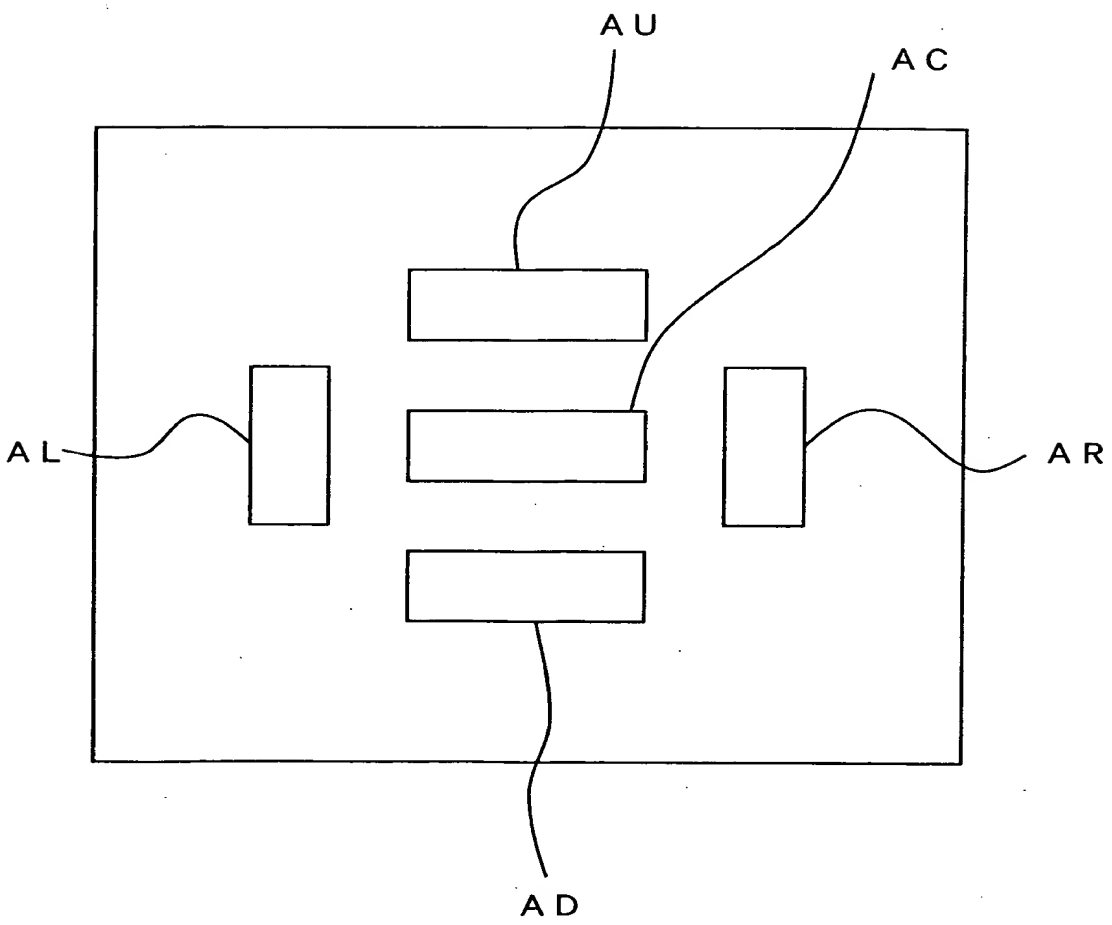


FIG. 7

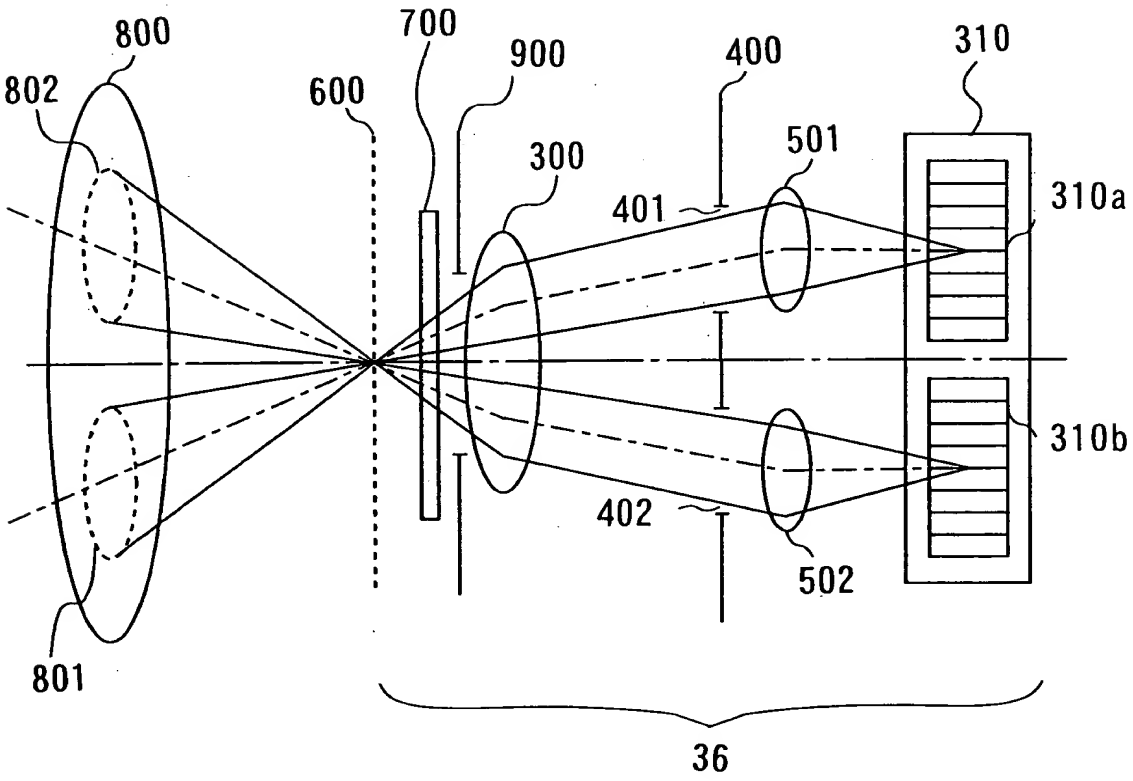


FIG. 8A

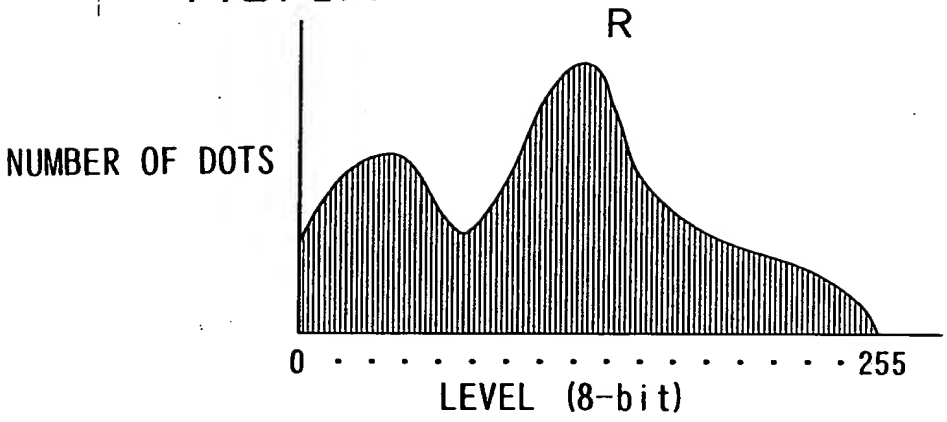


FIG. 8B

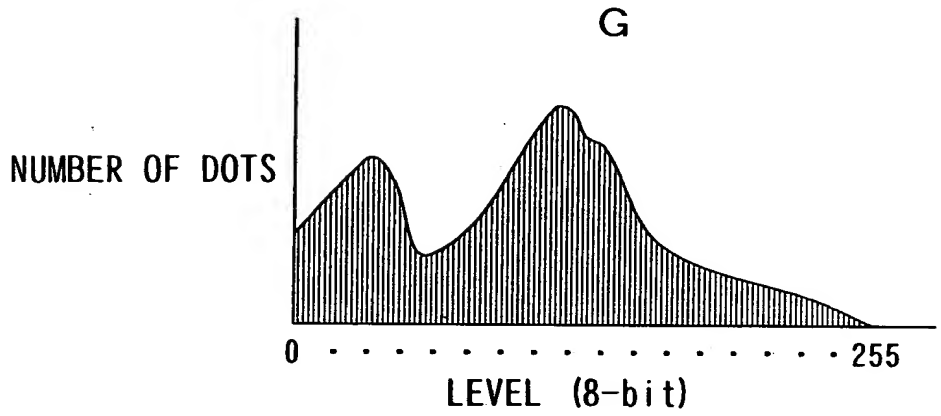


FIG. 8C

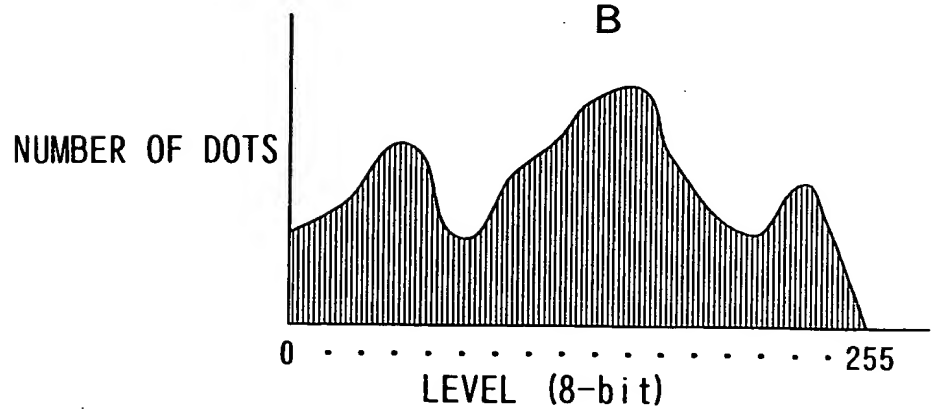


FIG. 9

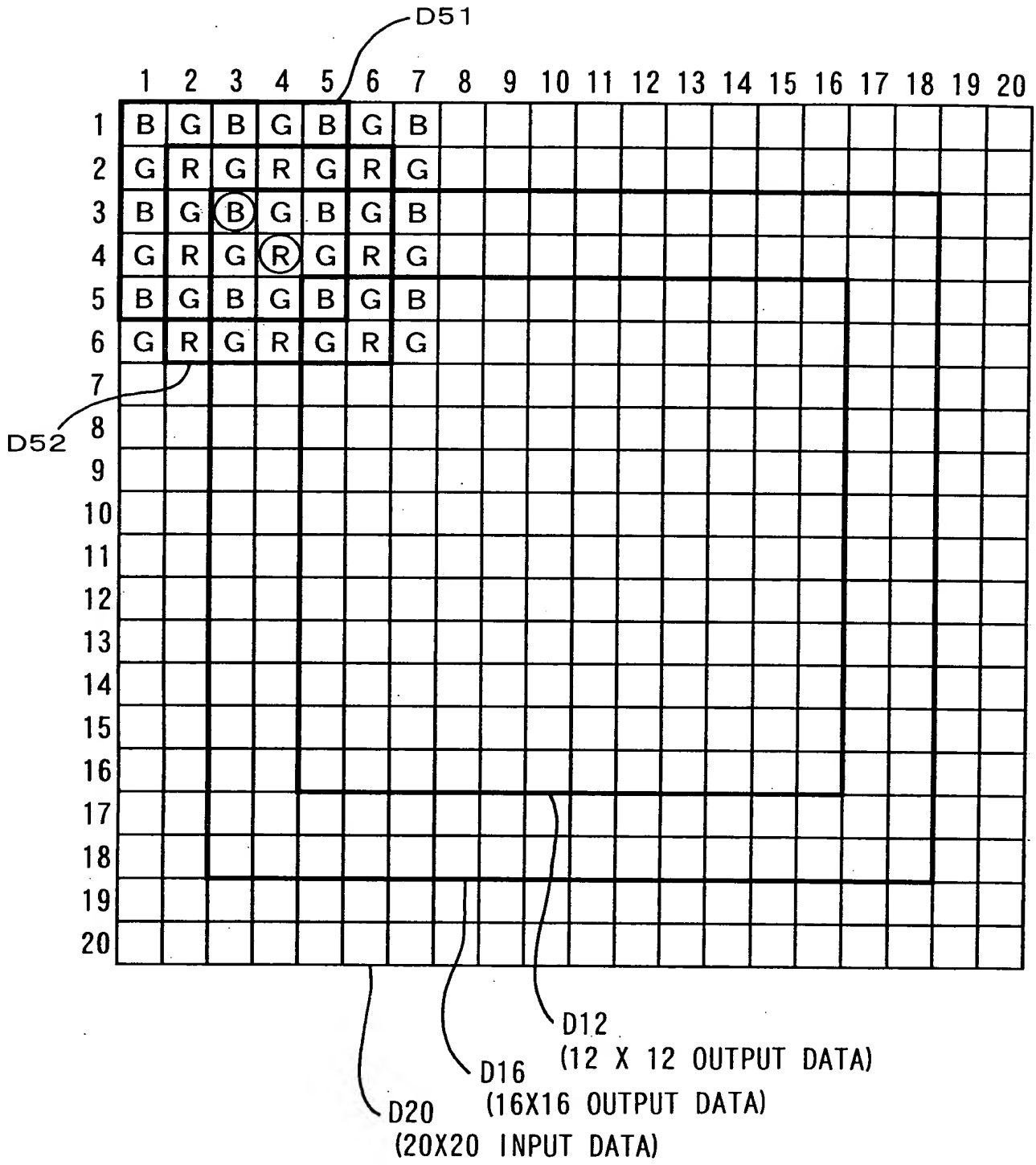

D51
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
B G B G B G B
G R G R G R G
B G B G B G B
G R G R G R G
B G B G B G B
G R G R G R G
D52
D12
(12 X 12 OUTPUT DATA)
D16
(16X16 OUTPUT DATA)
D20
(20X20 INPUT DATA)

FIG. 10

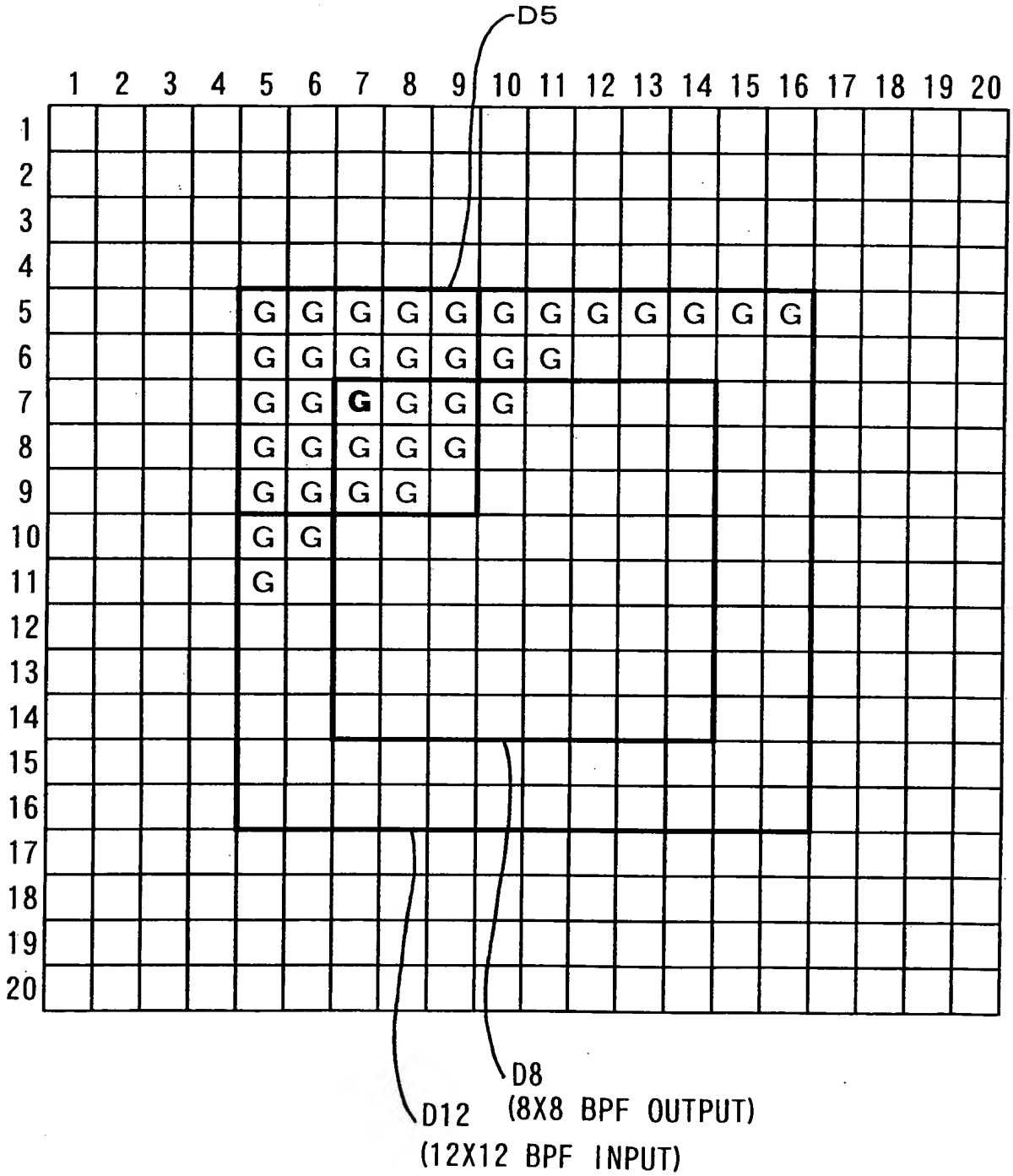

D5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
1
2
3
4
5 G G G G G G G G G G G G
6 G G G G G G G
7 G G G G G G
8 G G G G G
9 G G G G
10 G G
11 G
12
13
14
15
16
17
18
19
20
D8
(8X8 BPF OUTPUT)
D12
(12X12 BPF INPUT)

FIG. 11

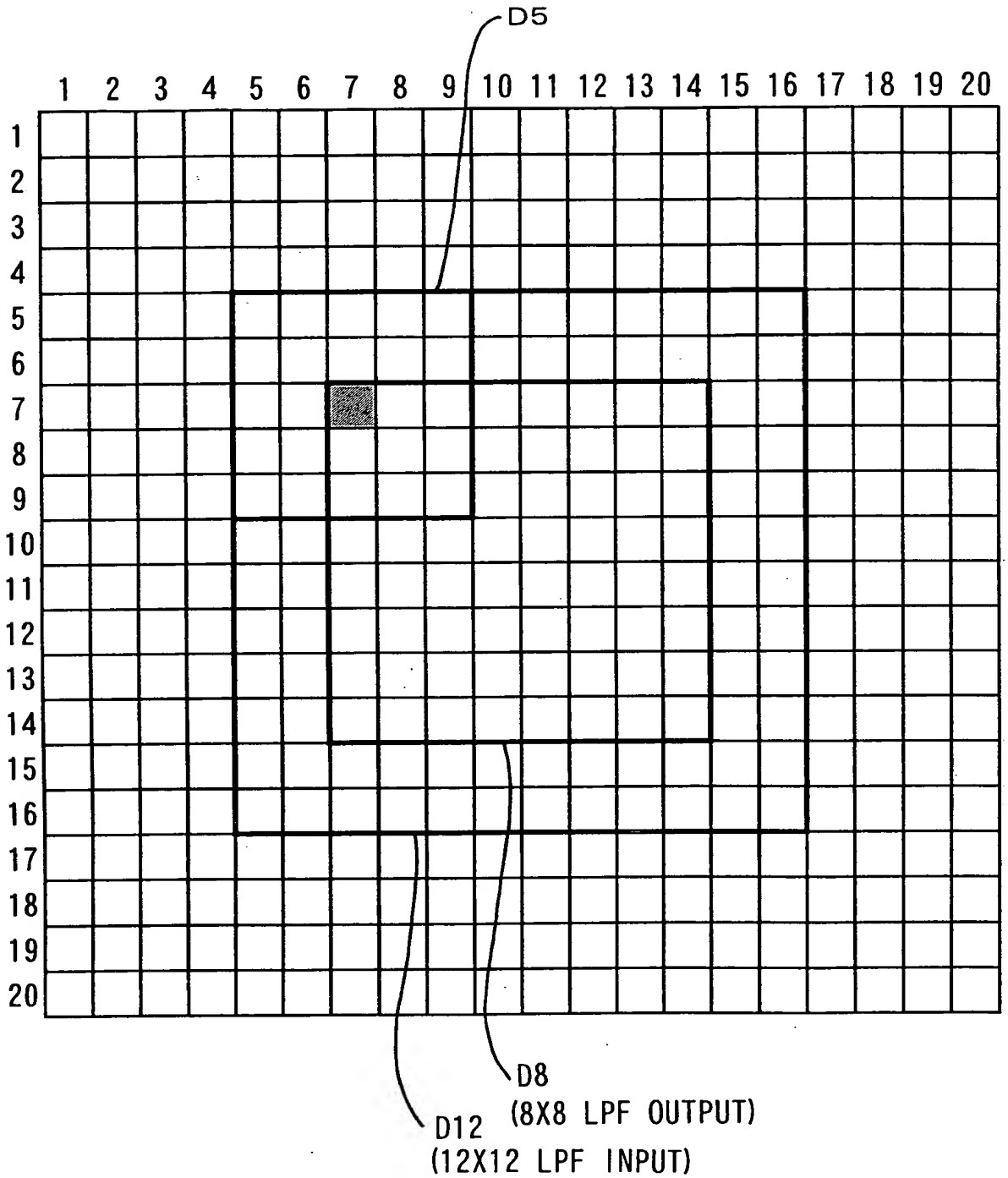

D5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
D8
(8X8 LPF OUTPUT)
D12
(12X12 LPF INPUT)

FIG. 12

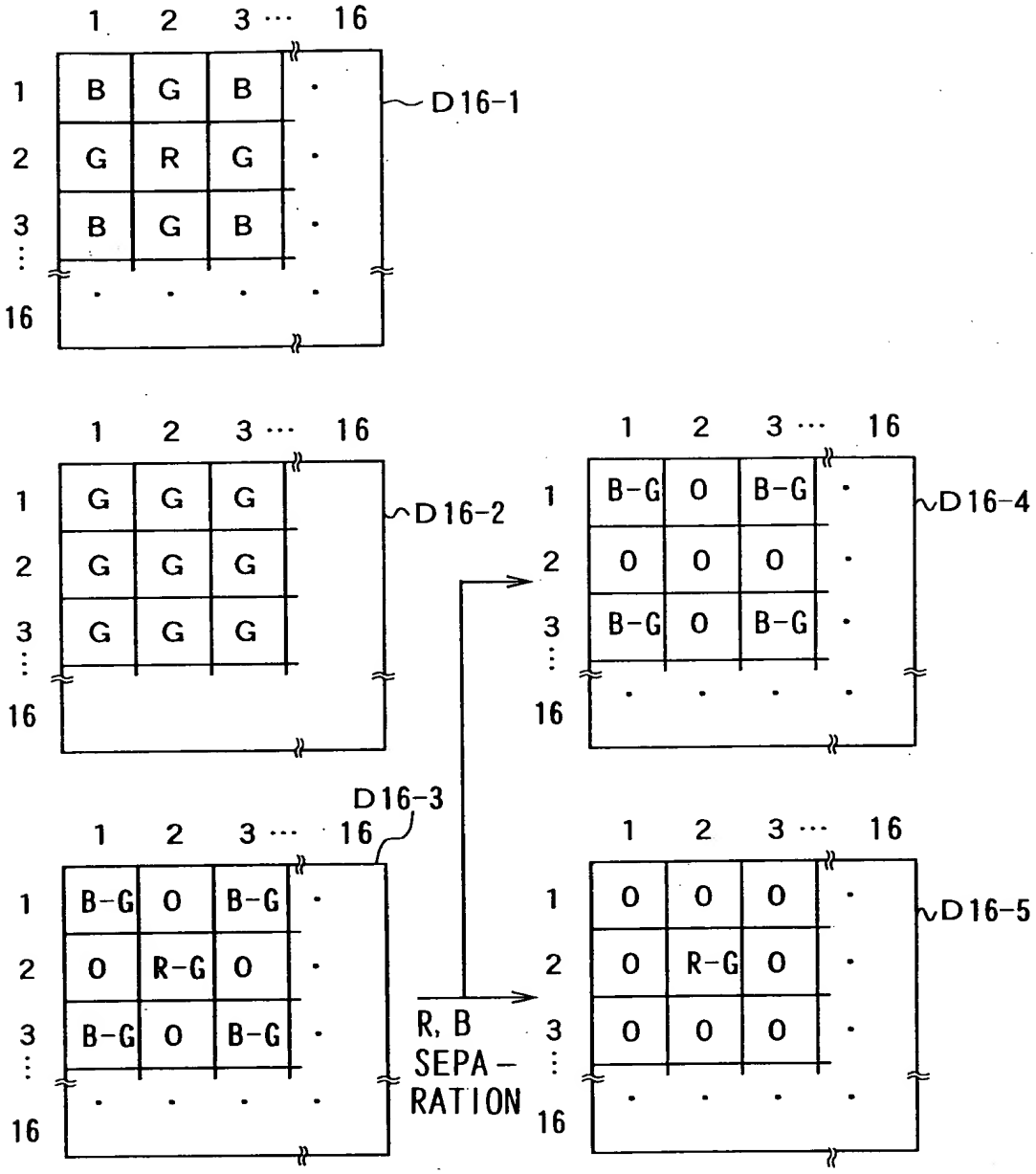

1 2 3 ··· 16
1
2
3
16
B G B
G R G
B G B
D16-1
G G G
G G G
G G G
D16-2
B-G O B-G
O O O
B-G O B-G
D16-4
D16-3
B-G O B-G
O R-G O
B-G O B-G
R, B SEPA-RATION
O O O
O R-G O
O O O
D16-5

FIG. 13

R-G (i-2, j-2)	0	R-G (i, j-2)	0	R-G (i+2, j-2)
0	0	0	0	0
R-G (i-2, j)	0	R-G (i, j)	0	R-G (i+2, j)
0	0	0	0	0
R-G (i-2, j+2)	0	R-G (I, j+2)	0	R-G (i+2, j+2)

FIG. 14

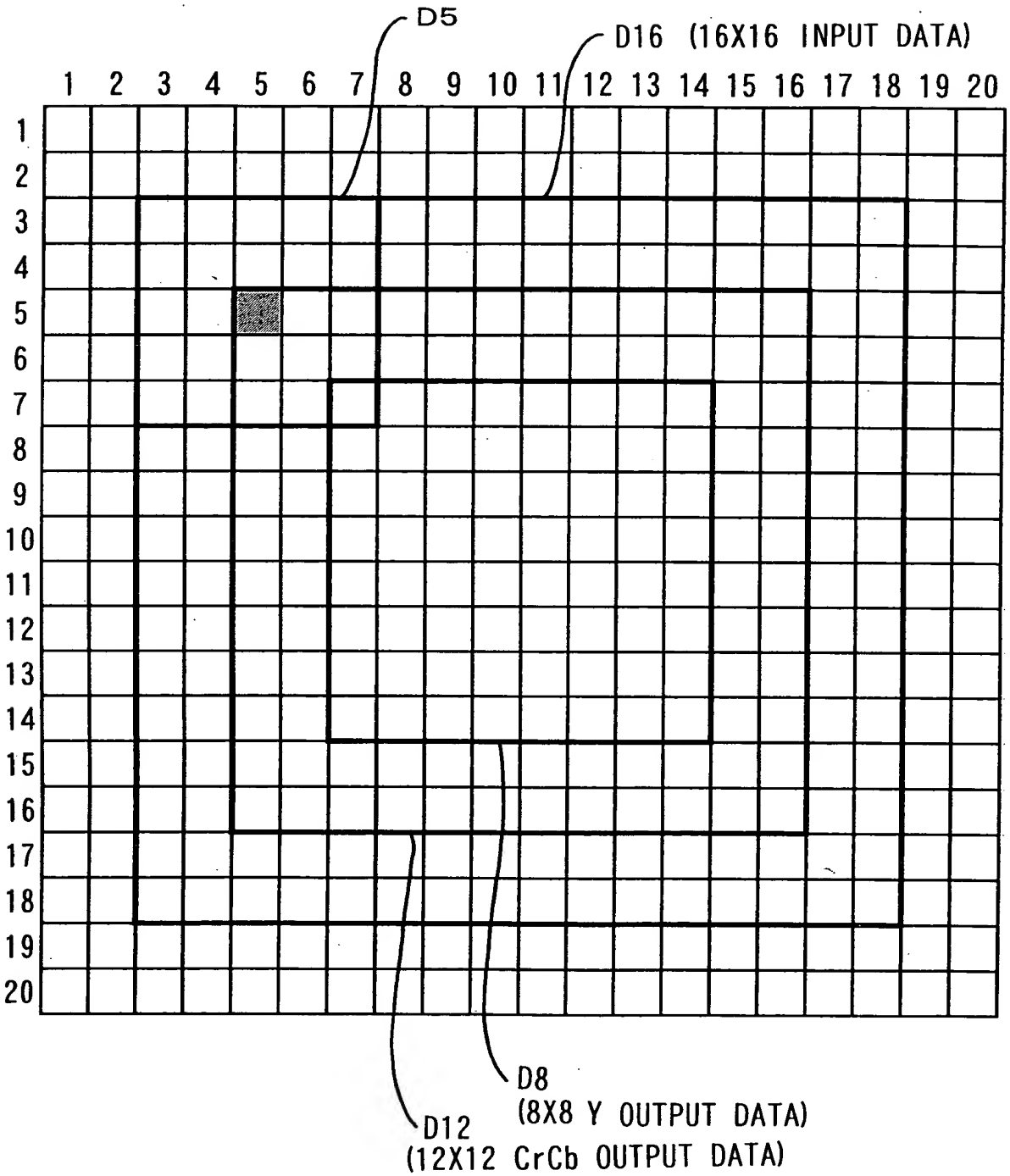

D5
D16 (16X16 INPUT DATA)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
D8
(8X8 Y OUTPUT DATA)
D12
(12X12 CrCb OUTPUT DATA)

FIG. 15

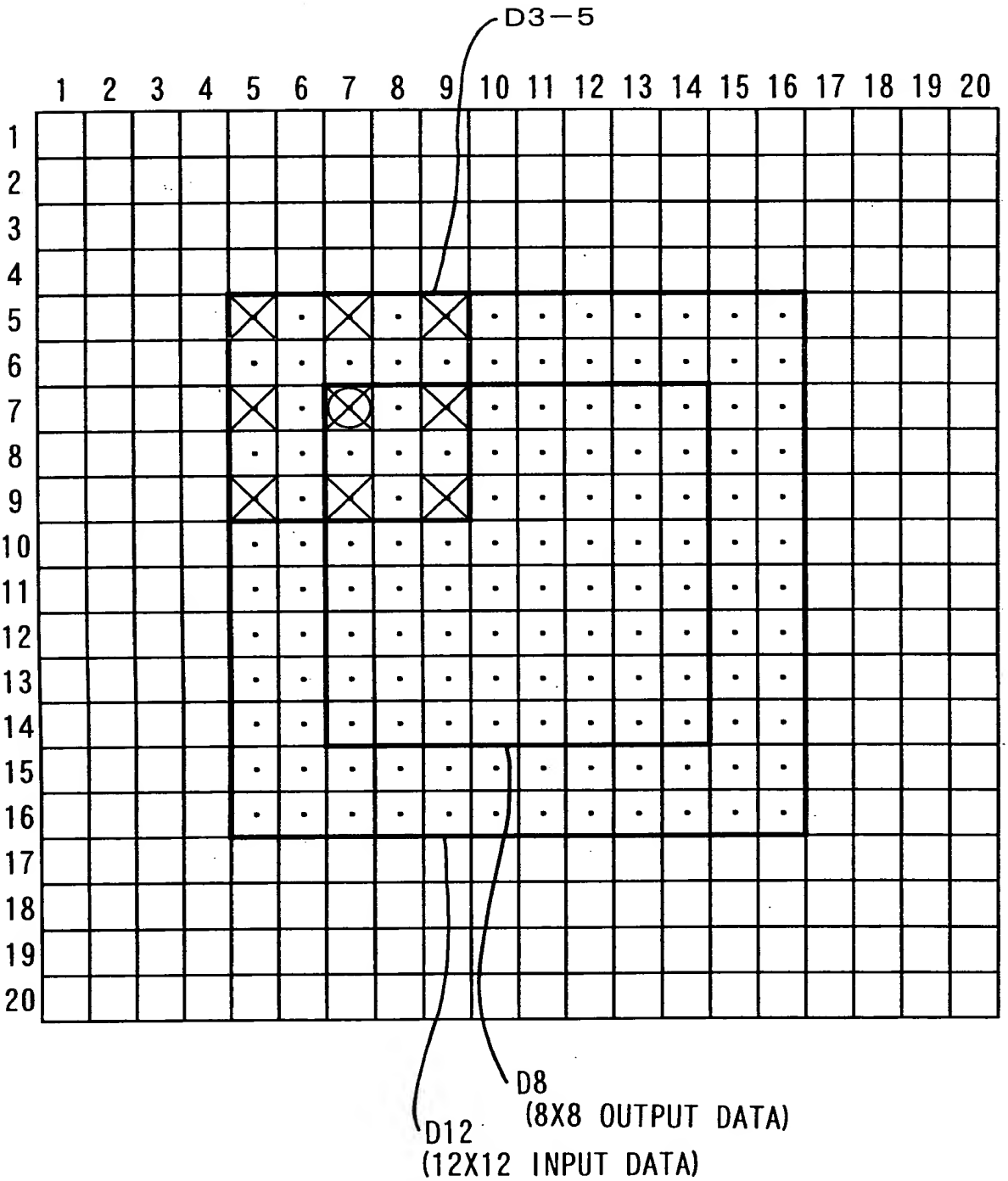

D3−5
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
D8
(8X8 OUTPUT DATA)
D12
(12X12 INPUT DATA)

FIG. 16

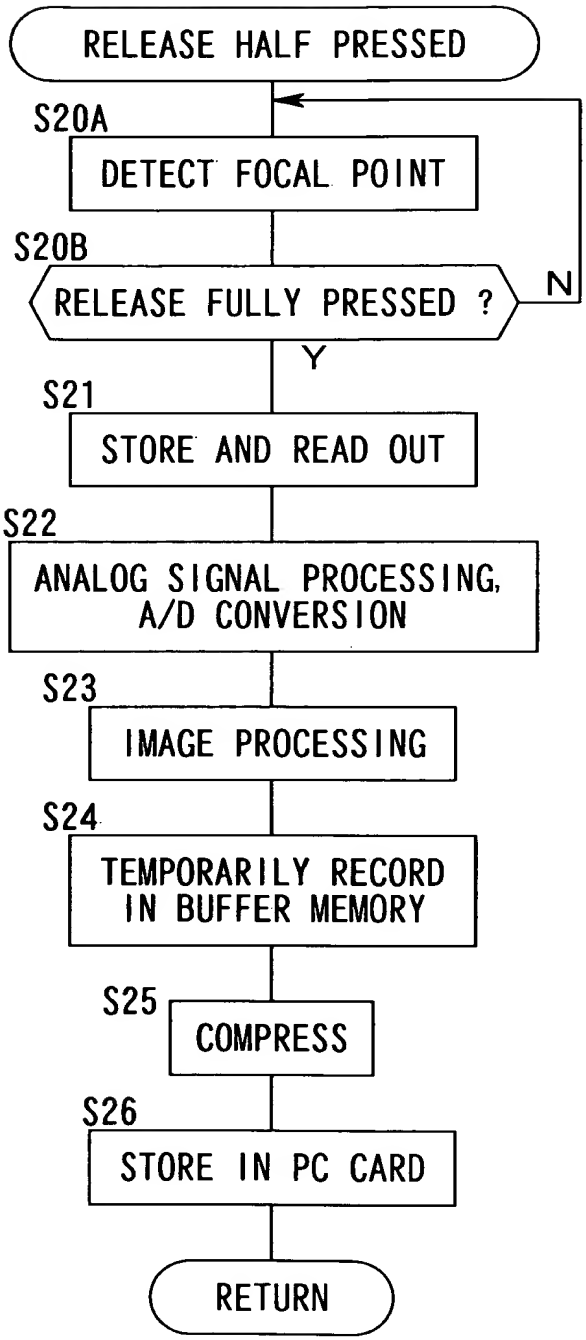

RELEASE HALF PRESSED
S20A
DETECT FOCAL POINT
S20B
RELEASE FULLY PRESSED ?
N
Y
S21
STORE AND READ OUT
S22
ANALOG SIGNAL PROCESSING, A/D CONVERSION
S23
IMAGE PROCESSING
S24
TEMPORARILY RECORD IN BUFFER MEMORY
S25
COMPRESS
S26
STORE IN PC CARD
RETURN

FIG. 17

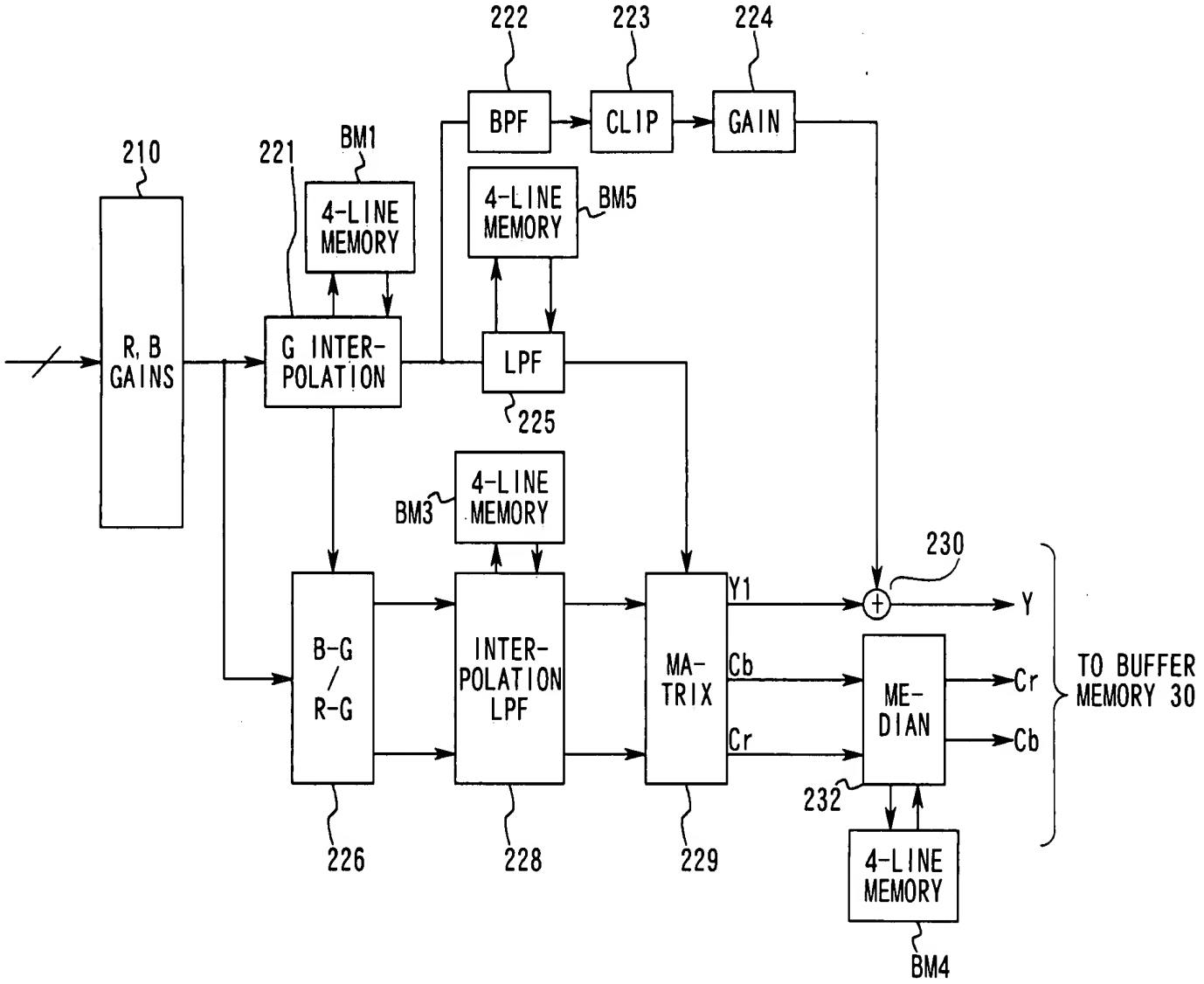

222
223
224
BPF
CLIP
GAIN
210
221
BM1
4-LINE MEMORY
4-LINE MEMORY
BM5
R, B GAINS
G INTER-POLATION
LPF
225
4-LINE MEMORY
BM3
230
Y1
Y
B-G / R-G
INTER-POLATION LPF
MA-TRIX
Cb
Cr
ME-DIAN
Cr
Cb
TO BUFFER MEMORY 30
232
226
228
229
4-LINE MEMORY
BM4

FIG. 18

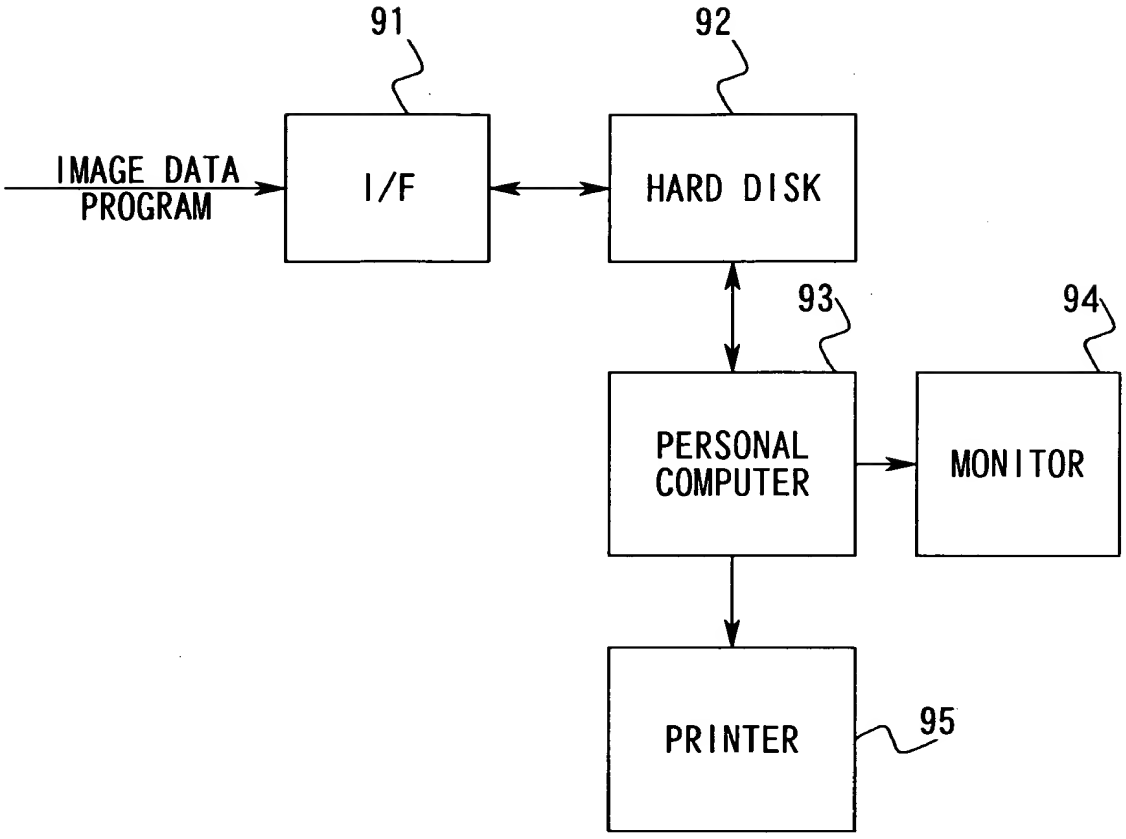

91
92
IMAGE DATA
PROGRAM
I/F
HARD DISK
93
94
PERSONAL
COMPUTER
MONITOR
PRINTER
95

FIG. 19

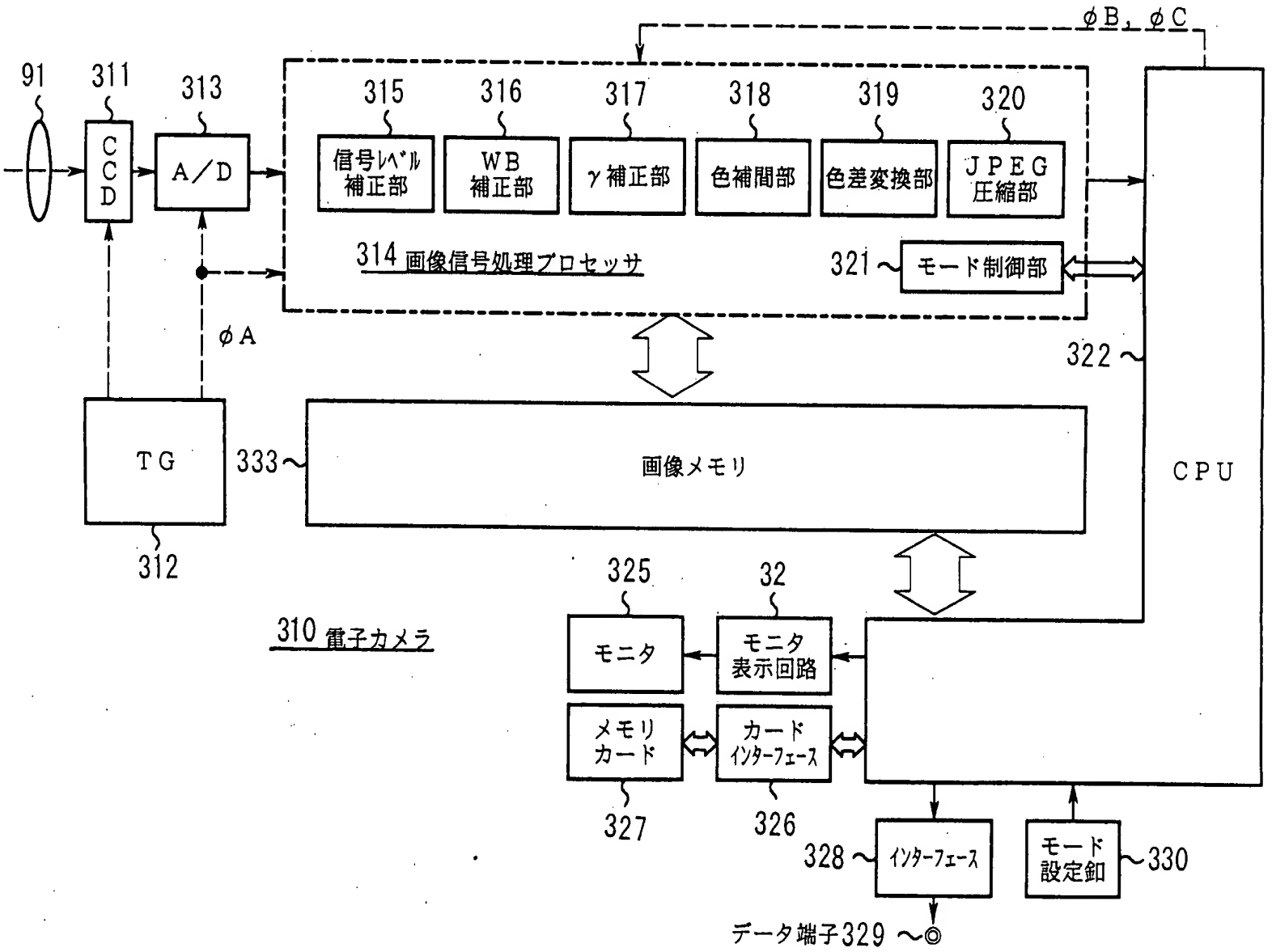

φB, φC
91
311
313
315
316
317
318
319
320
CCD
A/D
信号レベル補正部
WB補正部
γ補正部
色補間部
色差変換部
JPEG圧縮部
314 画像信号処理プロセッサ
321
モード制御部
φA
322
CPU
TG
333
画像メモリ
312
325
32
310 電子カメラ
モニタ
モニタ表示回路
メモリカード
カードインターフェース
327
326
328
インターフェース
モード設定釦
330
データ端子329

FIG. 20

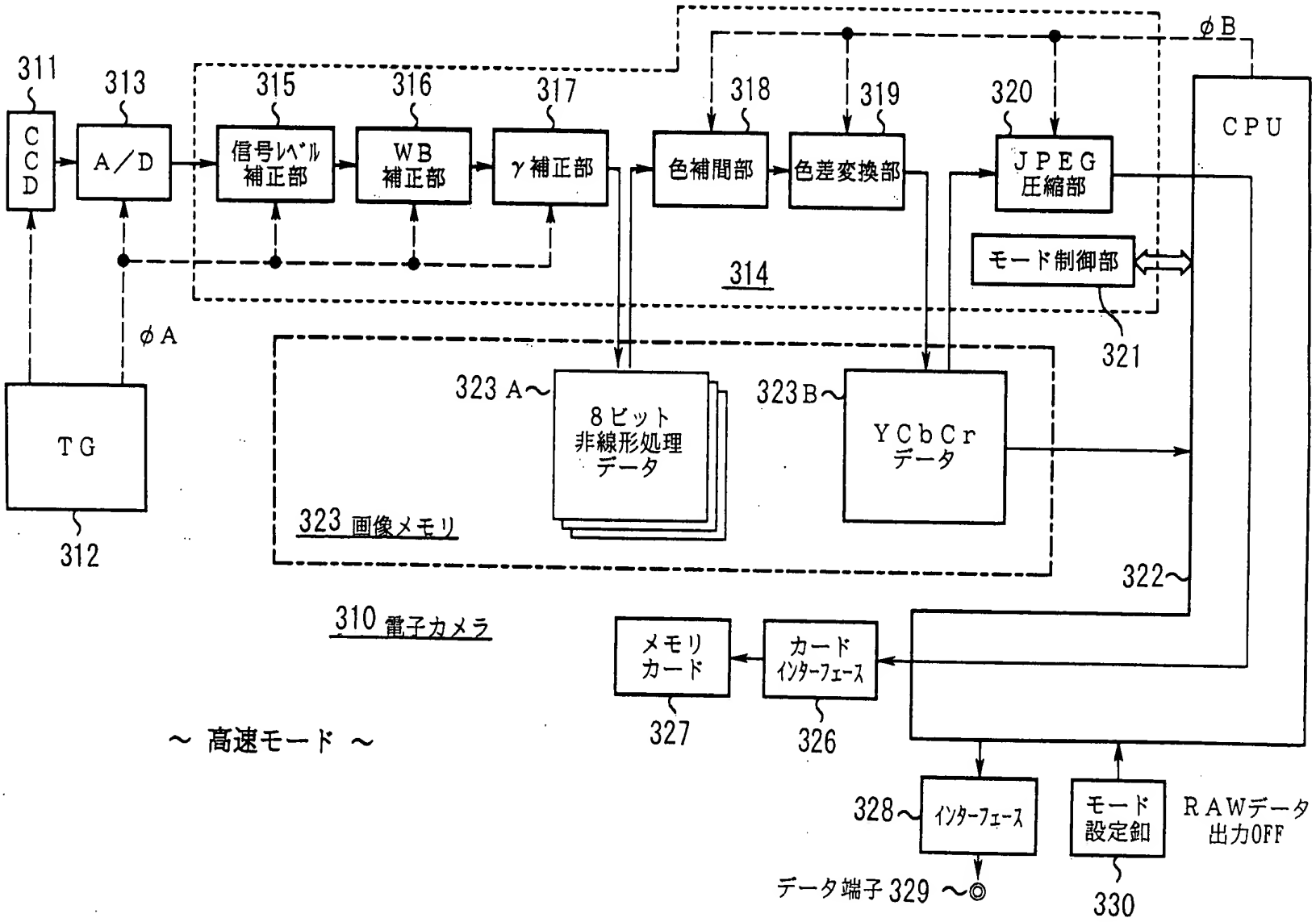

φB
311
313
315
316
317
318
319
320
CPU
CCD
A／D
信号ﾚﾍﾞﾙ補正部
WB補正部
γ補正部
色補間部
色差変換部
JPEG圧縮部
モード制御部
314
321
φA
323 A
8ビット非線形処理データ
323B
YCbCrデータ
TG
312
323 画像メモリ
322
310 電子カメラ
メモリカード
カードｲﾝﾀｰﾌｪｰｽ
327
326
～ 高速モード ～
328
ｲﾝﾀｰﾌｪｰｽ
モード設定釦
RAWデータ出力OFF
データ端子 329
330

FIG. 21